

COMPRESSION METHOD FOR AVIATION WEATHER PRODUCTS

ABSTRACT

An imagery compression algorithm is disclosed for transmitting imagery data to an aircraft over a relatively narrow bandwidth channel. The imagery data is first trimmed to include only images required by the aircraft during flight. The image is also de-cluttered by removing geographical boundary lines and isolated pixels that likely do not represent relevant weather imagery data. The compression scheme provides a plurality of instructions for compressing the image data. The first instruction depicts the number of multiple image lines that contain no imagery data, i.e., they indicate only the background display color. Two instructions identify short background color segments and long background segments, wherein the division between short and long segments is a predetermined value. Each of the data or color pixels is individually encoded with a fourth instructions characterizing the number of successive data pixels followed by a bit sequence indicating the color of each individual data pixel.